

clock speed varying in the same way as variations in the operating characteristics of the electronic devices making up the microprocessor. This allows the microprocessor to operate at its fastest safe operating speed, given its manufacturing process or changes in its operating temperature or voltage. In contrast, prior art microprocessor systems are given a rated speed based on possible worst case operating conditions and an external clock is used to drive them no faster than the rated speed. Under other than worst case operating conditions, the prior art microprocessors are actually capable of operating at a faster clock speed than their rated speed.

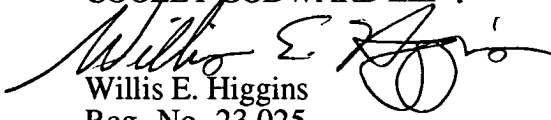
The above changes to the claims have been made to bring out the above distinction over the prior art more clearly. It is believed that they overcome the rejection of claims 19-21, 65-67 and 71-79 under 35 USC § 112, define statutory subject matter, i.e, a system implemented as a single integrated circuit having defined characteristics or a process, as well as distinguishing over the prior art of record.

In the rejection under 35 USC § 103, the Examiner contends that the Sheets reference "clearly indicates in lines 46-48 of column 2 that the system 100 shown in Figure 1 is fabricated *on a single chip* using MOS technology." Specific issue is taken with the inclusion of the italicized language in this characterization of the reference. Sheets does not say that the system 100 is on a single chip, only that it is implemented in MOS technology. At column 5, lines 15-17, a specific example of the Motorola 68000 microprocessor is given. That microprocessor is driven by an external clock that provides a clock signal to a designated pin of the microprocessor integrated circuit package. Applicants are aware of no prior art teaching or suggesting a variable speed oscillator in the same integrated circuit with a microprocessor and clocking the microprocessor with a clock speed that varies correspondingly with changes in operating characteristics of electronic devices making up the microprocessor, as a result of being in the same integrated circuit as the microprocessor, as claimed. Even if the Examiner is correct that the variable clock in Sheets is in the same integrated circuit as the microprocessor of system 100, that still does not give the claimed subject matter. In Sheets, a command input is required to change the clock speed. In the present invention, the clock speed varies correspondingly to variations in operating parameters of the electronic devices of the microprocessor because both the variable speed clock and the microprocessor are fabricated together in the same integrated circuit. No command input is necessary to change the clock frequency. The rejection under 35 USC § 103 is believed to be overcome.

All of the claims in the application are believed to be patentable over the prior art. This application is believed to be in condition for allowance, and allowance is solicited.

Respectfully submitted,

COOLEY GODWARD LLP.


Willis E. Higgins
Reg. No. 23,025

Five Palo Alto Square
Palo Alto, CA 94306-2155
Telephone: (415) 843-5145